

Product Evaluation

SHU235 | 0621

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: SHU-235

Effective Date: June 1, 2021

Re-evaluation Date: June 2025

Product Name: 24-Gauge Galvanized Bertha Steel Corrugated Storm Panels (2-1/4" Deep), Impact Resistant

Manufacturer: Eastern Metal Supply
4268 West Roads Drive
West Palm Beach, FL 33407
(561) 209-8263

General Description:

The Bertha steel storm panels are 24-Gauge galvanized steel panels. Full panels without hemmed edges are rolled formed, having a nominal width of 12" and a total width of 15.119", forming 2.25" deep ribs. Full panels with hemmed edges are rolled formed, having a nominal width of 12" and a total width of 14.845", forming 2.25" deep ribs. Panels are overlapped to provide an unlimited width of opening perpendicular to the panel span. The 24-gauge galvanized steel corrugated shutters in this evaluation report are not a permanently mounted shutter system.

Limitations:

Mounting Conditions: The shutters may be wall mounted, build-out mounted, and ceiling and floor mounted. Refer to the approved drawings for the acceptable mounting conditions.

Wall Construction: The shutters may be mounted to the following types of wall framing:

- Cast-in-place concrete (minimum 3,000 psi)
- Hollow or grout-filled concrete masonry units (CMU), C-90
- Wood framed construction (minimum Southern Yellow Pine, minimum S.G.-0.55)

Design Drawings: The shutters are installed in accordance with Eastern Metal Supply, Inc; Drawing No. 21-027; Sheets 1-8 of 8; dated January 21, 2021; signed, sealed, and dated January 27, 2021 by Walter A. Tillit, Jr, P.E. The stated drawings will be referred to as approved drawings in this report. A copy of the approved drawings must be available at the job site.

Product Identification: The shutter assembly has a permanent label that indicates the manufacturer (Eastern Metal Supply); the name of the product ((2-1/4") 24 GA Galvanized Bertha Steel Corrugated Storm Panel); the missile level (Missile Level D); the test standards: ASTM E 330-14 ASTM E 1886-13a, ASTM E 1996-14a; and the TDI evaluation report number (SHU-235).

Compliance: The shutters comply with ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a.

Allowable Design Pressure: The allowable design pressure can vary as a function of corrugated panel span, attachment anchor type, mounting condition, and structure substrate. Refer to the approved drawings for specific design pressure requirements.

Minimum Separation from Glass: The approved drawings specify a minimum separation from the glass. The shutters may not be installed below a height of 30 feet on essential facilities as defined in ASTM E 1996-14a.

Maximum Allowable Panel Span: The maximum allowable panel span is 155". Refer to the approved design drawings for specific panel span limitations.

Maximum Allowable Width: There is no limit to the shutter assembly width (defined as the orientation perpendicular to the panel span).

Impact Resistance: The shutter assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris. The assembly passed the equivalent of Missile Level D specified in ASTM E 1996-14a. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. The shutters may not be installed below a height of 30 feet on essential facilities as defined in ASTM E 1996-14a.

Installation:

General Installation Instructions: Install the shutters in accordance with the approved drawings and this product evaluation.

Anchorage: The shutter assembly is anchored to the structure in accordance with the approved drawings. Anchorage of the shutters must follow the mounting details on the drawings, the fasteners specified in the mounting details, and the fastener schedules.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.